

Residue#		
Rabbit AA		HPSAEVDVTHGKVLGKFVSXEGFAQPVAKFKG
Rabbit	(P12337)	HPSAEPVDTVKGVLGKFVSLEGFAQPVAVFLGVP
Hut	(P23141)	MMLRATLTLASAAWGHPSPPVDTVHGKVLGKFVSLEGFAQPVAVFLGIP
Rat	(P10959)	MMLCALVWASLAVCPINWGHSSPPVDTTKGVLGKYSLEGFTQPVAVFLGVP
Mouse	(P23953)	MMHLALVWASLAVCPILGHSLLPPVDTTQGVLGKYSISLEGFEQPVAVFLGVP

FIGURE 1

Residue #
Amino acid sequence
Coding Sequence

1 5
His Pro Ser Ala Pro
CAC CCA AGC GCA CC
T G T G
C C
T T

Residue # 518
Amino acid sequence
Coding sequence
Ala Phe Trp Thr Glu Leu Trp
GCA TTC TGG ACA GAA CTA TGG
G T G G G
C C C C
T T T T

Oligonucleotide
Rab51

CAC CCI AGC GCI CC
T T

Reverse complement

CCA AAG TTC AGT CCA GAA AGC
G C G A G
C C C
T T T

Amino acid sequence
Coding Sequence

His Pro Ser Ala Pro
CAC CCA AGC GCA CC
T G T G
C C
T T

Oligonucleotide
Rab 31

CCA TAG TTC IGT VVA GAA IGC
C A

Oligonucleotide
Rab 52

CAC CCI TCI GCI CC

Amino acid sequence
Coding sequence
Ala Phe Trp Thr Glu Leu Trp
GCA TTC TGG ACA GAA CTA TGG
G T G G G
C C C
T T T

Reverse complement

CCA TAA TTC AGT CCA GAA AGT
C C G A G
C C C
T T T

FIGURE 2

Oligonucleotide

CCA TAA TTC IGT CCA GAA IGC
C C A

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Residue #		
Rabbit		MMLCALALASIACTAWGHPSAPPVVDTVK
Rat	(P10959)	MMLCALVWASLAVCPINGHPSPPVVDTVK
Human	(P23141)	MMLRAFILATLSASAAGHPSPPVVDTVH
Rat	(P16303)	MRLYPVLVWLFIACTAWGYESSPPVVNTVK
Mouse	(P23953)	MMHLHALVWASLAVCPILGHSLLPPVVDTVQ

FIGURE 3

GAATTCAGCC. ATG TGG CTC TGT GCA TTG GCC CTG GCC TCT CTC GCC GCT TGC ACG GCT TGG GGG CAC CCG TCT GCA CCA
 1 *Met Trp Leu Cys Ala Leu Ala Leu Ala Ser Leu Ala Ala Cys Thr Ala Trp Gly His Pro Ser Ala Pro*
 24 CCT GTG GTA GAT ACT GTG CAT GGC AAA GTC CTG GGG AAG TTC GTG AGC TTA GAA GGA TTT GCA CAG CCC GTG GCC
 Pro Val Val Asp Thr Val His Gly Lys Val Leu Gly Lys Phe Val Ser Leu Glu Gly Phe Ala Gln Pro Val Ala
 49 GTC TTC CTG GGA GTC CCC TTC GCC AAG CCC CCT CTT GGA TCC CTG AGG TTT GCA CCA CCA CAG CCT GCA GAA TCA
 Val Phe Leu Gly Val Pro Phe Ala Lys Pro Pro Leu Gly Ser Leu Arg Phe Ala Pro Pro Gln Pro Ala Glu Ser
 74 TTG AGC CAC GTG AAG AAC ACC ACC TCC TAC CCT CCC ATG TGC TCC CAG GAC GCA GTA TCA GGG CAT ATG CTC TCG
 Trp Ser His Val Lys Asn Thr Thr Ser Tyr Pro Pro Met Cys Ser Gln Asp Ala Val Ser Gly His Met Leu Ser
 99 GAG CTC TTC ACC AAC AGA AAA GAG AAC ATC CCT CTT AAG TTT TCT GAA GAC TGC CTT TAC CTG AAT ATT TAC ACC
 Glu Leu Phe Thr Asn Arg Lys Glu Asn Ile Pro Leu Lys Phe Ser Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Thr
 124 CCT GCT GAC CTG ACA AAG AGA GGC AGG CTG CCG GTG ATG GTG TGG ATC CAT GGA GGT GGT CTG ATG GTG GGT GGA
Pro Ala Asp Leu Thr Lys Arg Gly Arg Leu Pro Val Met Val Trp Ile His Gly Gly Gly Leu Met Val Gly Gly
 149 GCA TCA ACC TAT GAT GGC CTG GCT CTT TCT GCC CAT GAG AAC GTG GTG GTG ACC ATT CAG TAC CGC CTG GGC
 Ala Ser Thr Tyr Asp Gly Leu Ala Leu Ser Ala His Glu Asn Val Val Val Thr Ile Gln Tyr Arg Leu Gly
 174 ATC TGG GGA TTC TTC AGC ACA GGA GAT GAG CAC AGC CGA GGG AAC TGG GGT CAC TTG GAC CAG GTG GCT GCG CTG
 Ile Trp Gly Phe Phe Ser Thr Gly Asp Glu His Ser Arg Gly Asn Trp Gly His Leu Asp Gln Val Ala Ala Leu
 199 CGG TGG GTC CAG GAC AAC ATT GCC AAC TTT GGA GGG GAC CCA GGC TCT GTG ACC ATC TTT GGA GAG TCA GCA GGA
 Arg Trp Val Gln Asp Asn Ile Ala Asn Phe Gly Gly Asp Pro Gly Ser Val Thr Ile Phe Gly Glu Ser Ala Gly
 *

FIGURE 4

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TAT CGG TAT CGC CCA AGC TTC TCA TCA GAC ATG AGA CCC AAG ACA GTG ATA GGG GAC CAT GGA GAT GAG ATC TTC
 Glu Tyr Arg Tyr Arg Pro Ser Phe Ser Ser Asp Met Arg Pro Lys Thr Val Ile Gly Asp His Gly Asp Glu Ile
 TCT GTC TTA GGA GCC CCG TTT TTA AAA GAG GGT GCC ACA GAA GAG GAG ATC AAA CTG AGC AAG ATG GTG ATG AAA
 Phe Ser Val Leu Gly Ala Pro Phe Leu Lys Glu Gly Ala Thr Glu Glu Glu Ile Lys Leu Ser Lys Met Val Met
 TAC TGG GCC AAC TTT GCT AGG AAT GGG AAT CCC AAT GGA GAA GGG CTT CCT CAA TGG CCA GCA TAT GAC TAC AAG
 Tyr Trp Ala Asn Phe Ala Arg Asn Gly Asn Pro Asn Gly Glu Gly Leu Pro Glu Trp Pro Ala Tyr Asp Tyr
 GAA GGT TAC CTG CAG ATT GGA GCC ACC ACC CAG GCA GCC CAG AAA CTG AAA GAC AAG GAA GTG GCT TTC TGG ACT
 Lys Glu Gly Tyr Leu Glu Ile Gly Ala Thr Thr Glu Ala Ala Glu Lys Leu Lys Asp Lys Glu Val Ala Phe Trp
 GAG CTC TGG GCC AAG GAG GAG GCA GCA AGG CCA CGT GAG ACA GAG GAG CAC ATT GAG CTG TGA ATT GAATTC
 Thr Glu Leu Trp Ala Lys Glu Ala Ala Arg Pro Arg Glu Thr Glu His Ile Glu Leu

FIGURE 4 CONTINUED

GGA GGT CAA AGT GTC TCT ATC CTT CTA TTA TCC CCC CTG ACC AAG AAT CTC TTC CAT CGA GCA ATT TCC GAG AGT
 Ala Gly Gly Gln Ser Val Ser Ile Leu Leu Leu Ser Pro Leu Thr Lys Asn Leu Phe His Arg Ala Ile Ser Glu
 GGC GTG GCC CTC CTT TCC AGT CTC TTC AAG AAG AAC ACC AAG TCC TTG GCT GAG AAA ATT GCC ATC GAA GCT GGG
 Ser Gly Val Ala Leu Leu Ser Ser Leu Phe Arg Lys Asn Thr Lys Ser Leu Ala Glu Lys Ile Ala Ile Glu Ala
 TGT AAA ACC ACC ACC TCG GCT GTC ATG GTT CAC TGC CTG CGC CAG AAG ACA GAG GAA GAA CTC ATG GAG GTG ACA
 Gly Cys Lys Thr Thr Thr Ser Ala Val Met Val His Cys Leu Arg Gln Lys Thr Glu Glu Glu Leu Met Glu Val
 TTA ATA ATG AAA TTT ATG GCT CTA GAT CTA GTT GGC GAC CCC AAA GAG AAC ACC GCC TTC CTG ACC ACT GTG ATT
 Thr Leu Lys Met Lys Phe Met Ala Leu Asp Leu Val Gly Asp Pro Lys Glu Asn Thr Ala Phe Leu Thr Thr Val
 GAT GGG GTG CTG CTG CCA AAA GCA CCT GCA GAG ATT CTG GCA GAG AAG AAA TAC AAC ATG ATG CTG CCC TAC ATG GTG
 Ile Asp Gly Val Val Leu Leu Pro Lys Ala Pro Ala Glu Ile Leu Ala Glu Lys Lys Tyr Asn Met Leu Pro Tyr Met
 GGA ATC AAC CAG CAA GAG TTT GGC TGG AAT ATC CCA ATG CAA ATG CTG GGC TAT CCA CTC TCT GAA GGC AAA CTG
 Val Gly Ile Asn Gln Gln Glu Phe Gly Trp Ile Ile Pro Met Gln Met Leu Gly Tyr Pro Leu Ser Glu Gly Lys
 GAC CAG AAG ACA GCT ACA GAA CTC TTG TGG AAG TCC TAC CCC ATT GTC AAT GTC TCT AAG GAG CTG ACT CCA GTG
 Leu Asp Gln Lys Thr Ala Thr Glu Leu Leu Trp Lys Ser Tyr Pro Ile Val Asn Val Ser Lys Glu Leu Thr Pro
 GCC ACT GAG AA TAT TTA GGA GGG ACA GAT GAC CCT GTC AAA AAG AAA GAC TTG TTC CTG GAC ATG ACT CTT GCA GAT
 Val Ala Thr Glu Lys Tyr Leu Gly Gly Thr Asp Asp Pro Val Lys Lys Lys Asp Leu Phe Leu Asp Met Leu Ala
 TTG TTA TTT GGT GTC CCA TCT GTG AAT GTG GCT CGT CAC CAC AGA GAT GCT GGA GCC CCC ACC TAT ATG TAT GAG
 Asn Leu Leu Phe Gly Val Pro Ser Val Asn Val Ala Arg His His Arg Asp Ala Gly Ala Pro Thr Tyr Met Tyr

FIGURE 4 CONTINUED

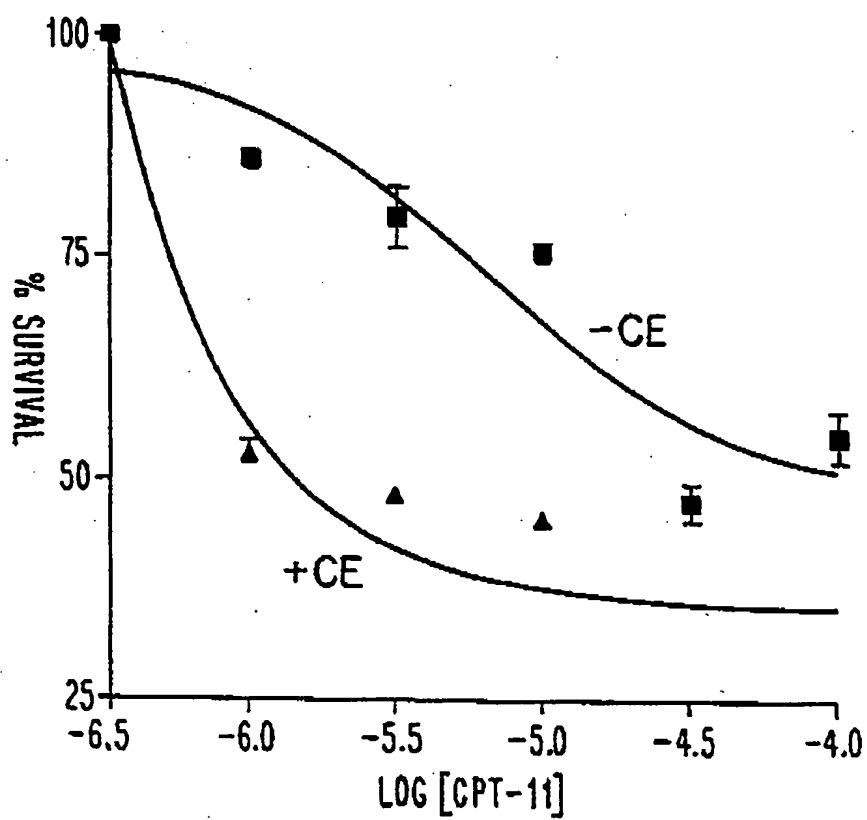


Fig. 5

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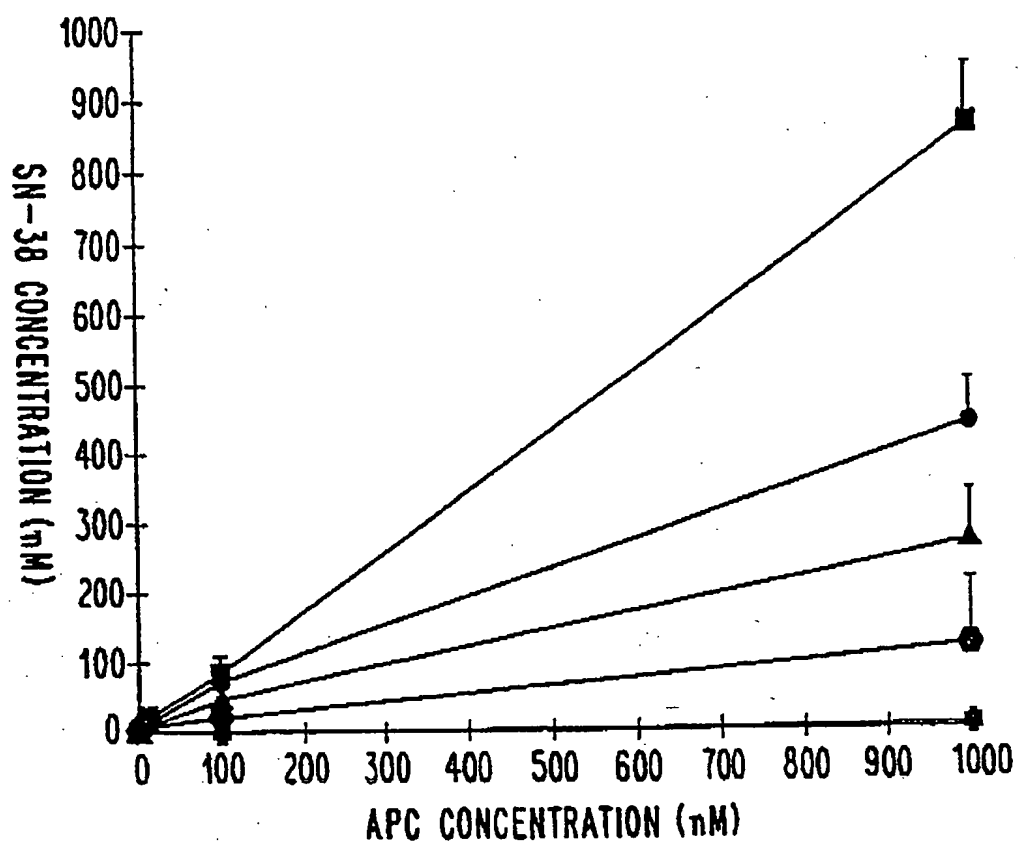


Fig. 6

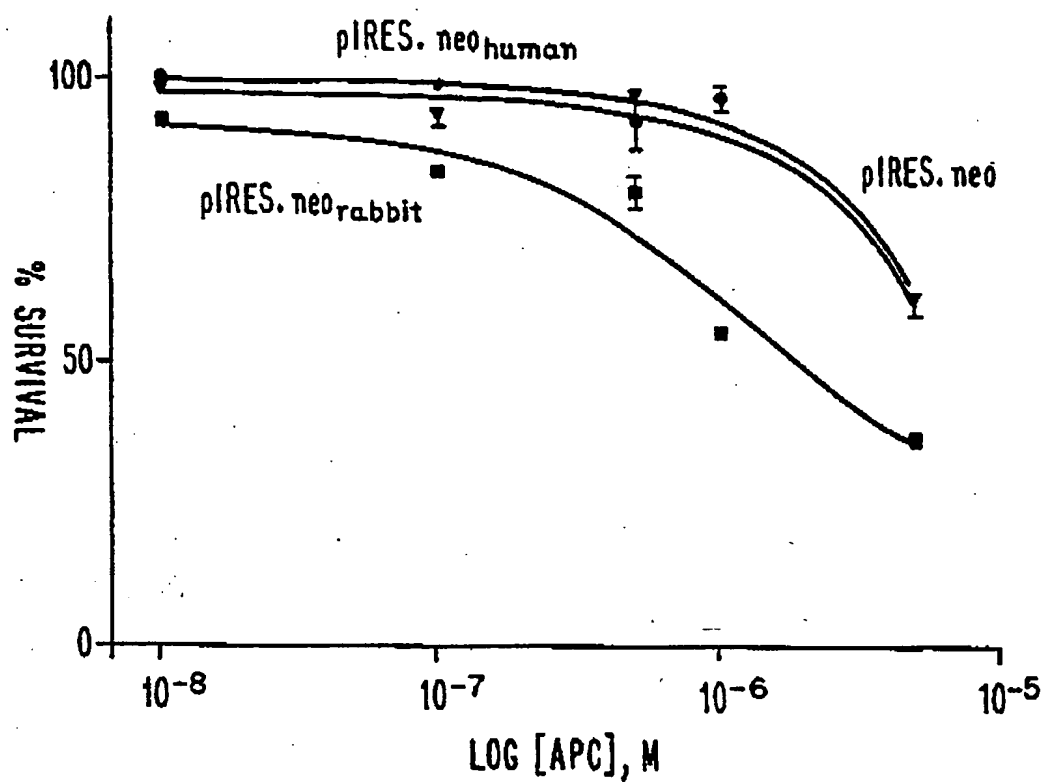


Fig. 7

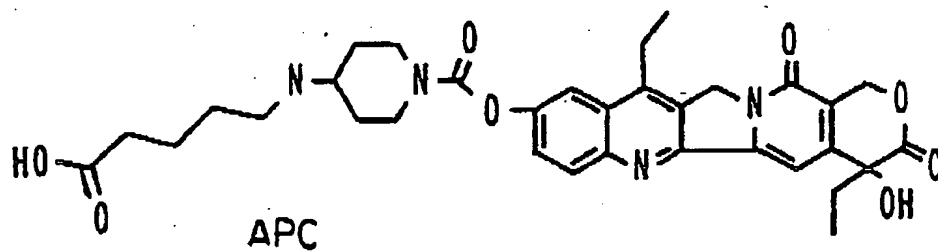
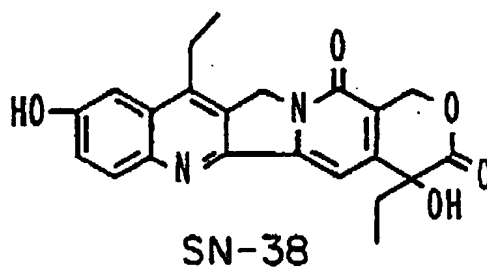
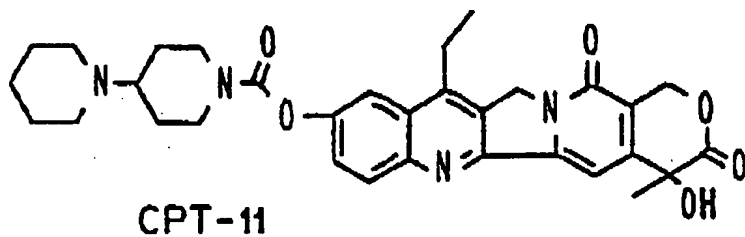


Fig. 8

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Fig. 9A

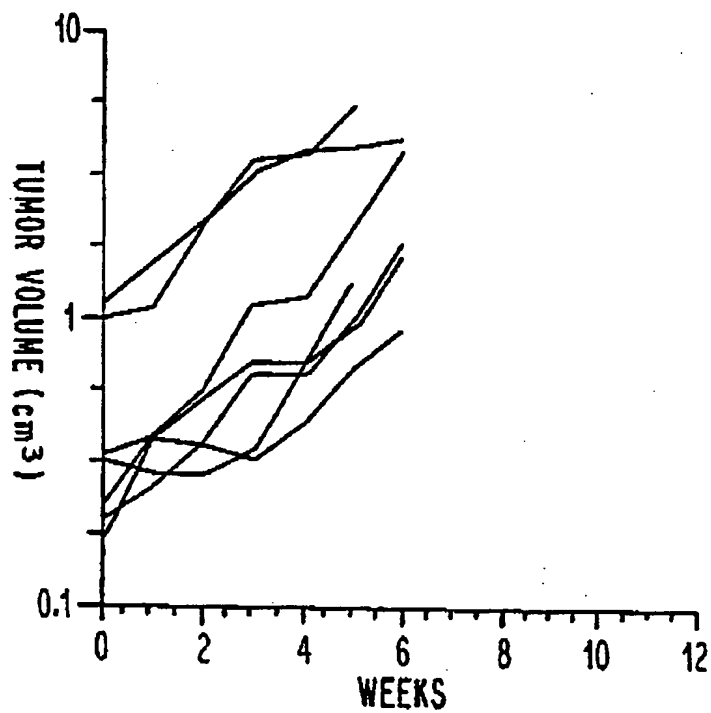
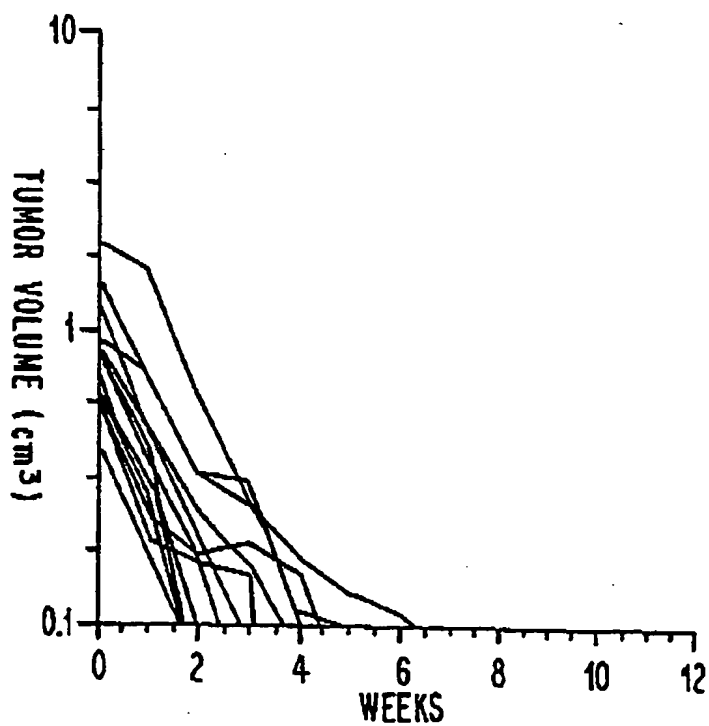


Fig. 9B



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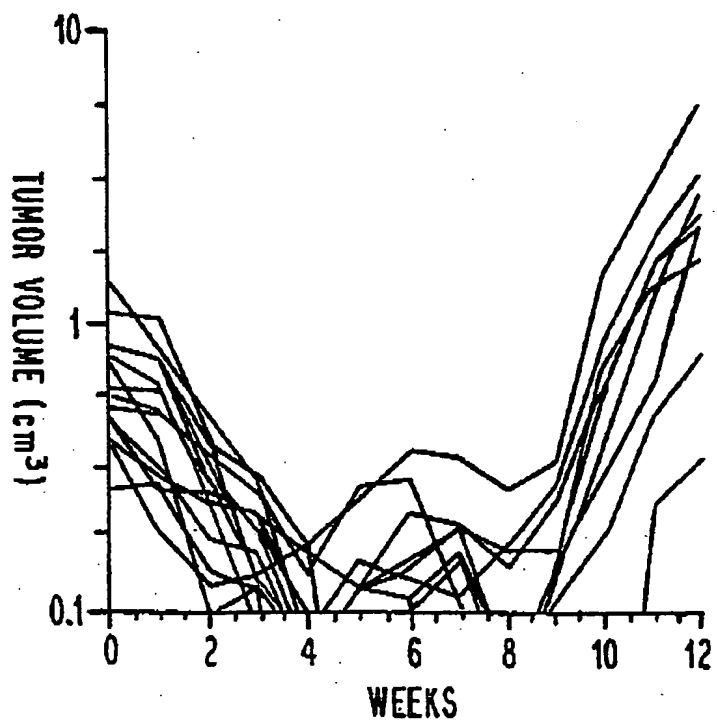


Fig. 9C

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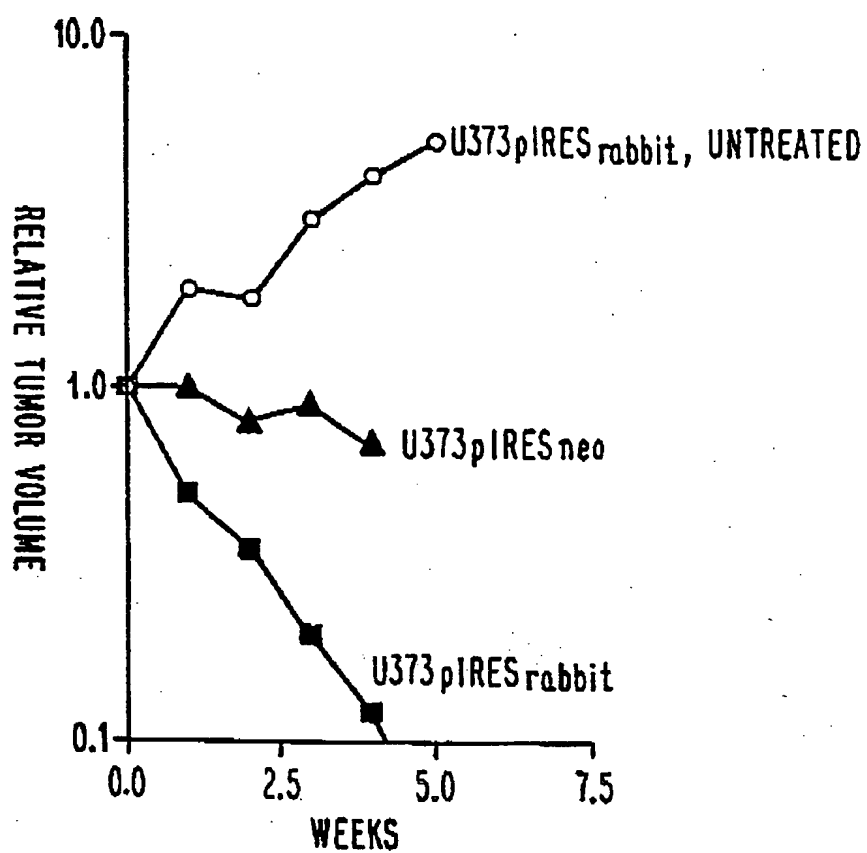


Fig. 10

Figure 11

